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library during the last five years has been over 19,000 volumes.

THE Teachers' College, Columbia University, has received from an anonymous donor a gift of \$40,000. Three other gifts of \$25,000 each have been received since December 1st.

THE Missouri Supreme Court, in an opinion by Justice Gante, on March 16th, declared the Missouri State University Free Scholarship Law unconstitutional. This law provided for the collection of a special tax on corporations and on patent medicine and a collateral tax of inheritance to establish free scholarships in the State University.

CONVOCATION week at the University of Chicago begins on Friday, April 1st. The President will make the quarterly report and the convocation address will be given by Professor William Knight, of St. Andrews University, his subject being 'Poetry and Science: Their Affinities and Contrasts.'

DR. CHARLES R. BARNES, of the University of Wisconsin, has been appointed professor of plant physiology in the University of Chicago.

PROFESSOR GATES, of Amherst College, has been given a year's leave of absence by the Trustees.

A BERLIN despatch states that a decree has been issued by the government forbidding the future attendance of foreigners in the machinery and engineering department of the Berlin Technical High School.

A UNIVERSITY EXTENSION meeting will be held in London from May 30th to June 11th. The program, which should be of interest to Americans visiting London, includes lectures by Sir John Evans, on 'London before the Saxons'; by Professor Skeat, on 'Chaucer's London'; and by Mr. Gollancz, on 'Shakespeare and the London Theatre.' Mr. Owen Seamen will give three lectures on 'The London Poets,' Mr. Mackinder two on 'The Geography of London,' and Mr. Arnold Mitchell three on 'London Architecture,' followed by a demonstration in the Church of St. Bartholomew, Smithfield. In the Education Section, Sir Joshua Fitch will deal with 'The National Portrait Gallery and its Educational Uses,' Professor Miall with

'The Curiosity of Children,' and Mr. Marriott with 'John Colet, the Founder of St. Paul's School.' A course of three lectures entitled 'Studies on Children' will be delivered by Mr. Earl Barnes, late professor of pedagogy in the Leland Stanford Junior University.

MR. HENRY HANNA, M.A., B.Sc., has been appointed demonstrator of biology, geology, and paleontology in the Royal College of Science, Dublin.

MR. J. G. KERR, a student of zoology, has been elected a fellow in Christ's College, Cambridge.

#### DISCUSSION AND CORRESPONDENCE.

##### THE TERMINOLOGY OF THE NEUROCYTE OR NERVE CELL.

THE writer is far from being one that regards the introduction of new terms, even where they seem to shorten a phrase or so, as necessarily an advance in science. But it seems as though some improvements might be made in the terminology of the neurocyte, not only in the use of terms already suggested and more or less employed, but also by suggesting at least two more. The varying senses in which some terms in use are employed and the different terms applied to the same thing are very confusing. Uni-, bi- and multi-polar cells one finds, for instance, according to the author read mean cells with one, two or more processes irrespective of whether they are recipient or discharging processes as regards the neural impulses that traverse them, or one finds that they mean cells with one, two or more discharging processes, axis cylinders or neurites irrespective of there being other processes. One finds the entire nerve cell spoken of as the nerve cell, neuron and as neurocyte; while that process, the main function of which appears to be that of bearing the neural impulse away from the cell body, or cell, when this is not to one side of the most direct course of the neural impulse, as is the case in the cells of the mammalian spinal ganglia and in all cases among the arthropods, is called the axiscylinder, axon, neuron and neurite. The other processes have been known as the protoplasmic processes or the dendrites.

Happily there is already a tendency to drop many of these synonyms. Let it be hoped in favor of neurocyte, neurite and dendrite, as being the least cumbersome and more in harmony with other words denoting a part, as, somite, sternite, tergite, phagocyte, etc., or as already, as in the case of neurocyte, having been thought by good authority sufficiently common to be given a place in popular dictionaries.

This terminology, however, seems to be insufficient for the needs of the study of the arthropod nervous system, where the part of the neurocyte containing the nucleus is situated on the outside of the nervous system and connected with the branching portions of the neurocyte by a stalk or process of greater or less length. It has always seemed misleading and more or less cumbersome to speak of this portion as the nerve cell, the cell, or the cell body. For this reason it appears that, to be in harmony with the other terms noted, that part of the neurocyte that in the older literature is called the nerve cell should be denominated the neurocyto-somite, or, more briefly, cytosomite. Such a term will not be misleading, nor, since it is a compound of frequently used particles, will it be difficult to retain.

In writing or speaking of the process just mentioned originating from an arthropod or spinal ganglion cell it has frequently seemed as though time and energy might be economized by giving this also a distinctive name. Instead of referring to a process from a neurocyte, neurocytic process, or a bundle of processes from such and such cells, it would be much better to use the word neurocytocalyte, or, briefly, calyte, which, along with cytosomite, is here suggested. It matters little whether some one may be able to show that calyte has, as seems probable, been used before in connection with some other subject, for it denotes a part, and the context in which it is used will prevent misconception. Should, however, a possibility of misconception arise, the difficulty may be readily overcome by using the form cytocalyte.

Summarizing the foregoing, the following morphological definition may be given a neurocyte: A cellular element of the nervous system, consisting of a cytosomite containing the

nucleus and, with or without a calyte connecting it with the remainder of the neurocyte, with a neurite or neurites, performing the one neural function of discharging neural impulses, and with a dendrite or dendrites functioning usually as the recipients, sometimes, also, as dischargers of neural impulses.

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#### RETINAL IMAGES AND BINOCULAR VISION.

IN SCIENCE of March 11th Professor Stevens added some valuable observations to the facts reported by me in an earlier (February 25th) issue. He has objected to my title 'Binocular Factors in Monocular Vision' on the ground that "the essential characteristic of binocular vision consists in the simultaneous formation of slightly dissimilar images on the two retinas, with corresponding modification of the perception of depth in space." The criticism is more than a merely verbal one and the facts reported assume entirely different aspects as the one position or the other is taken.

It is doubtless true that complete perception of objects depends in large measure on the presence of such slightly different images on the two retinas. But it is also true that even in such cases of complete perception there are sensation factors derived from the movements of both the external muscles of the eyes and the internal ciliary muscles. When the retinal image of one eye is withdrawn, does it follow that these other factors are also withdrawn? Evidently not. On the contrary, there is good reason to believe that so-called monocular vision is complicated by the presence of muscle-sensations from the closed eye. The first question to be raised and answered, then, is the question of the character of the movements which are the sources of these sensations. This was the question taken up in the first paper. Its results were applied directly to the solution of the main problem, namely, what are the binocular factors in so-called monocular vision? The double images, which are, as Professor Stevens very properly points out, monocular phenomena, were made use of in this experiment merely for the purpose of dis-